Mumbai University

[CBSGS – 60:40 Pattern] (April – 2014)

PAPER - I

Internet Technologies

Time: 2 ½ Hours   **Total Marks:** 60

N.B.: (1) *All Question are Compulsory.*
       (2) *Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.*
       (3) *Answer To The Same Question Must Be Written Together.*
       (4) *Number To The Right Indicates Marks.*
       (5) *Draw Neat Labeled Diagrams Wherever Necessary.*
       (6) *Use of Non – Programmable Calculator is allowed.*

Q.1   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Compare IPV4 with IPV6.   **(5)**
(B)   Describe the concept of Subnetting & Supernetting in IPV4 Class Full Addressing Technique.   **(5)**
(C)   Draw & explain a neat labelled diagram of IPV4 datagram Header Format.   **(5)**
(D)   Explain Dual Stack & Tunneling in IPV6.   **(5)**

Q.2   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Describe 3 phases of Communication between Remote Host & Mobiles Host.   **(5)**
(B)   What are the types of OSPF Packets? What is the purpose of each one?   **(5)**
(C)   Short note on ARP.   **(5)**
(D)   Describe the problem of Counting Infinity or Instability in RIP Distance Vector Routing.   **(5)**

Q.3   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Explain TCP Connection Termination by 3 Way Handshaking concept.   **(5)**
(B)   What are the types of TCP Timers? Explain the purpose of each one.   **(5)**
(C)   What are the services of UDP?   **(5)**
(D)   What is Silly Window Syndrome? Explain the Syndrome created by the Sender and the Receiver.   **(5)**

Q.4   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Explain SCTP association establishment.   **(5)**
(B)   What is Domain? What are the types of Domains in DNS? Explain.   **(5)**
(C)   What is a resolution in DNS? Explain.   **(5)**
(D)   Describe the DHCP Client-Server Operations in the same & Different Network.   **(5)**

Q.5   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Describe NVT character set for Option Negotiation.   **(5)**
(B)   What is the concept of Out-Of-Band Signaling?   **(5)**
(C)   Explain the Architecture of WWW.   **(5)**
(D)   List & explain the types of FTP Commands.   **(5)**

Q.6   **ATTEMPT ANY TWO QUESTIONS: (10 MARKS)**

(A)   Explain Video Compression using JPEG.   **(5)**
(B)   Describe Leaky Bucket Algorithm of Traffic Shaping.   **(5)**
(C)   Write a short note on MIME.   **(5)**
(D)   What are the services of Internet Audio & Video Communication? Explain the digitization process of Video Data.   **(5)**